AUTODOC CLUB

How to change rear coil springs on **Alfa Romeo 159 Sportwagon** – replacement guide





VIDEO TUTORIAL



Important!

This replacement procedure can be used for:
ALFA ROMEO 159 Sportwagon (939) 2.0 JTDM, ALFA ROMEO 159 Sportwagon (939) 1.9 JTS, ALFA ROMEO 159 Sportwagon (939) 1.9 JTDM 8V, ALFA ROMEO 159 Sportwagon (939) 1.9 JTDM 16V, ALFA ROMEO 159 Sportwagon (939) 2.4 JTDM, ALFA ROMEO 159 Sportwagon (939) 2.4 JTDM (939.BXM1B), ALFA ROMEO 159 Sportwagon (939) 1.8 MPI, ALFA ROMEO 159 Sportwagon (939) 1.8 TBi

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The steps may slightly vary depending on the car design.





REPLACEMENT: COIL SPRINGS – ALFA ROMEO 159 SPORTWAGON. TOOLS YOU NEED:



- Wire brush
- WD-40 spray
- Copper grease
- Combination spanner #17
- Combination spanner #18
- Combination spanner #21
- Combination spanner #22
- Drive socket # 8
- Drive socket # 10
- Drive socket # E14
- Drive socket # 16
- Drive socket # 18
- Drive socket # 21
- Drive socket # 22
- Torx bit T25
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Phillips screwdriver
- Clip removal tool
- Locking pliers
- Rubber mallet
- Crow bar
- Hydraulic strut spring compressor
- Hydraulic transmission jack
- Wheel chock

BUY TOOLS







Replacement: coil springs – Alfa Romeo 159 Sportwagon. Tip from AUTODOC:

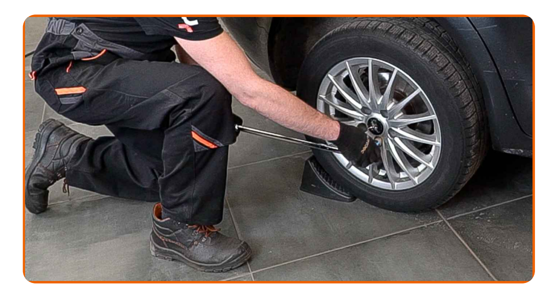
- Both coil springs of the rear suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right coil springs of the rear suspension.
- Please note: all work on the car – Alfa Romeo 159 Sportwagon – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

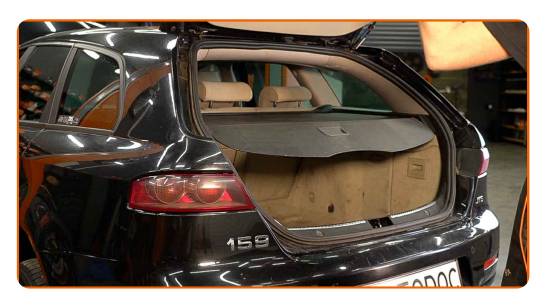
1 Secure the wheels with chocks.



2 Loosen the wheel mounting bolts. Use wheel impact socket #17.



3 Open the boot lid.

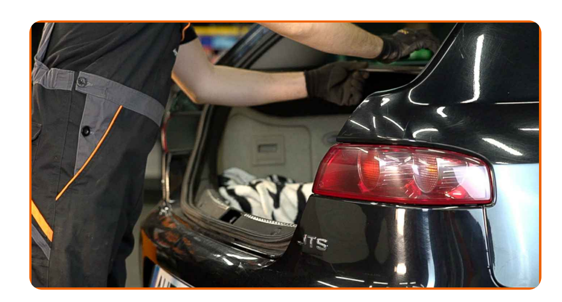




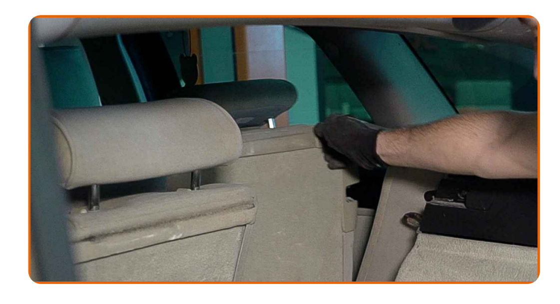




4 Move the folding shelf and detach it from the retainers. By doing this, you will get access to the side trim plastic panels.



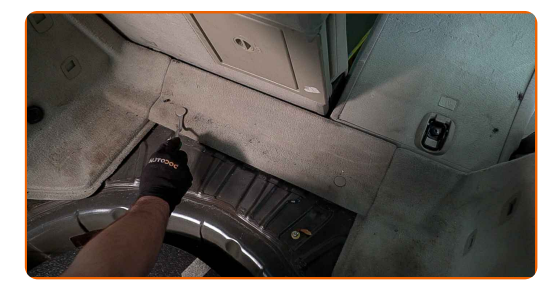
5 Fold down the backrests of the rear seats.



6 Raise the lower lining of the boot.



7 Remove the clips of the boot front lower lining. Use a clip removal tool.



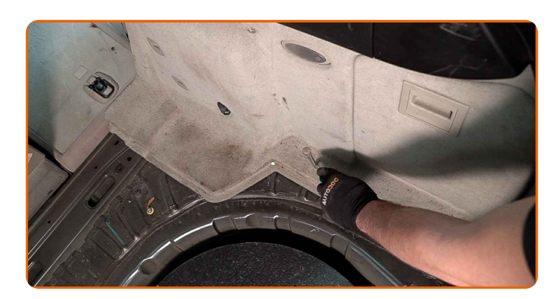
8 Remove the boot front lower lining.







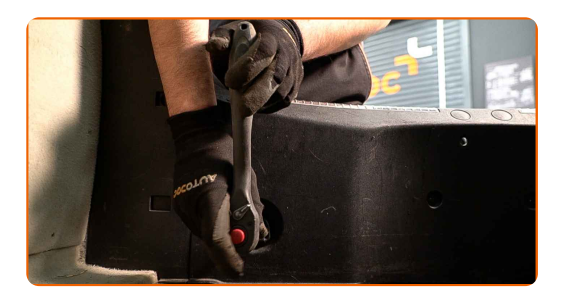
9 Remove the clips of the boot side lining. Use a clip removal tool.



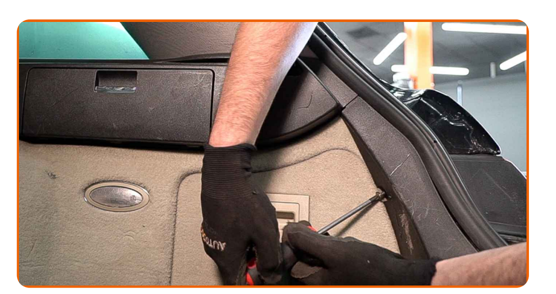
10 Unscrew the fastener of the boot side lining. Use Torx T25. Use a ratchet wrench.



11 Unscrew the fastener of the central protective plastic panel. Use Torx T25. Use a ratchet wrench. Use a Phillips screwdriver.



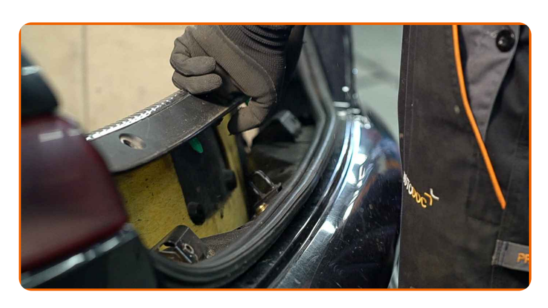
12 Unscrew the fasteners of the side plastic trim panel. Use a Phillips screwdriver.







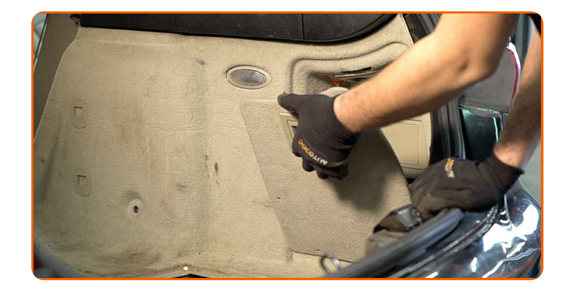
13 Remove the central protective plastic panel.



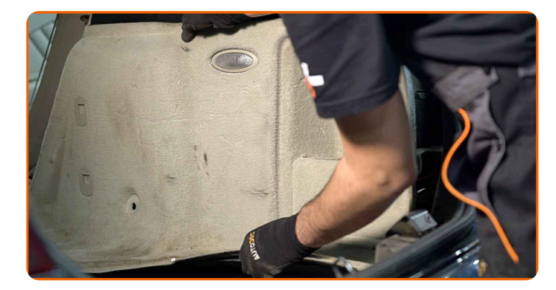
14 Remove the side plastic cover.



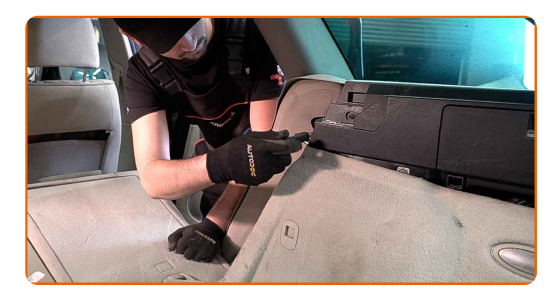
15 Remove the cover of the boot side lining.



16 Detach the boot side lining.



17 Remove the seat belt trim cover. Use a drive socket #10. Use a ratchet wrench.



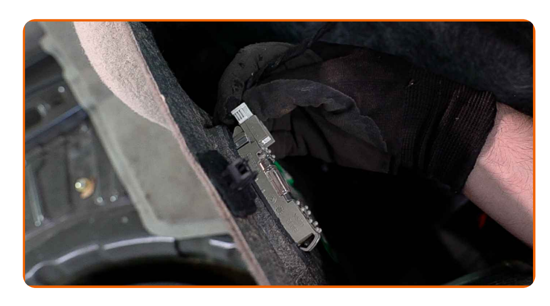




18 Remove the boot side lining.



19 Detach the bulb connector.



20 Unscrew the fastener and remove the boot side sound insulation.



21 Clean the fasteners of the shock absorber upper mount. Use WD-40 spray.

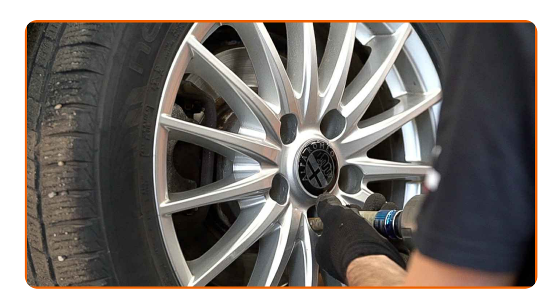


22 Raise the rear of the car and secure on supports.





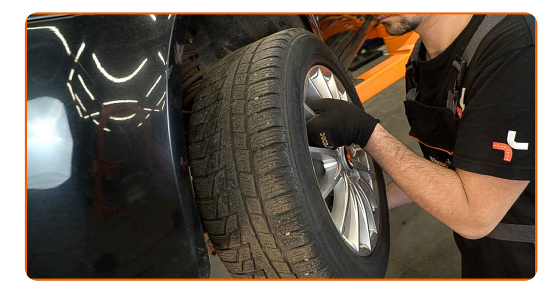
23 Unscrew the wheel bolts.



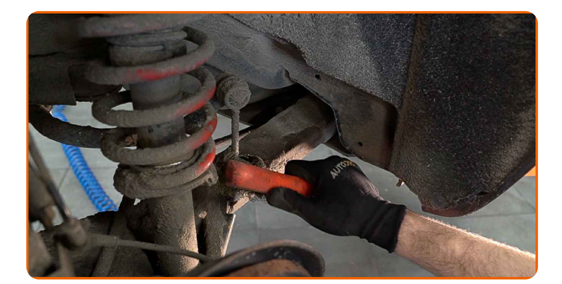
AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts. Alfa Romeo 159 Sportwagon

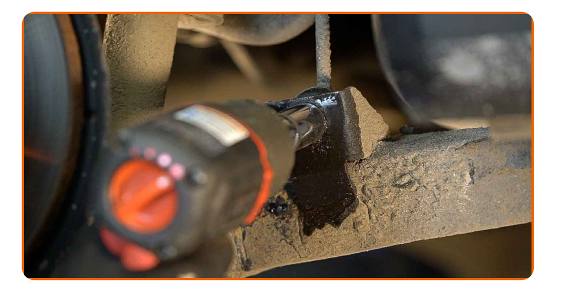
24 Remove the wheel.



25 Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.



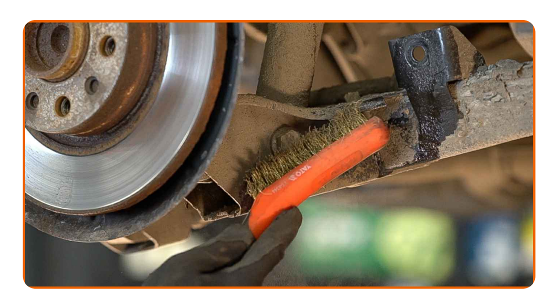
26 Unscrew the fastener connecting the stabilizer bar with the control arm. Use a drive socket #18.



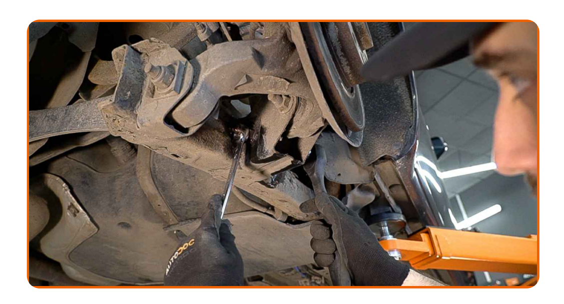




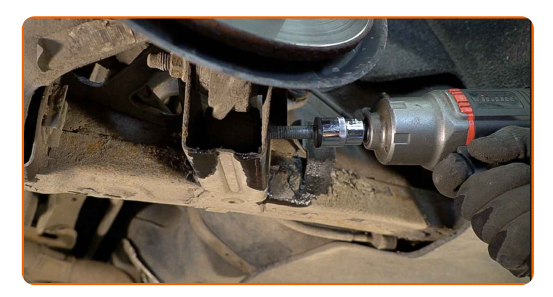
27 Clean the shock strut fasteners. Use a wire brush. Use WD-40 spray.



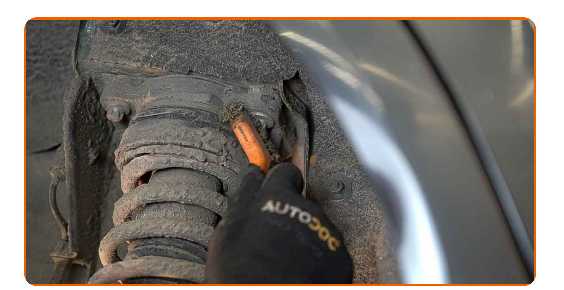
28 Unscrew the fastener connecting the shock strut to the suspension control arm. Use a combination spanner #21. Use a drive socket #21. Use a ratchet wrench.



29 Remove the fastening bolt.



30 Clean the fasteners of the shock strut upper mount. Use a wire brush. Use WD-40 spray.



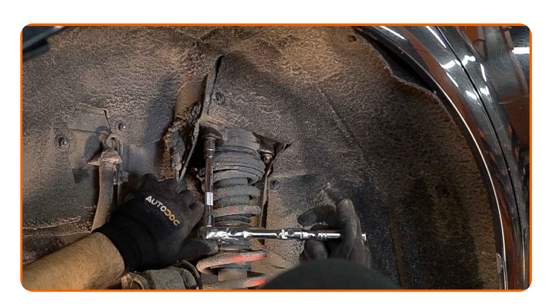






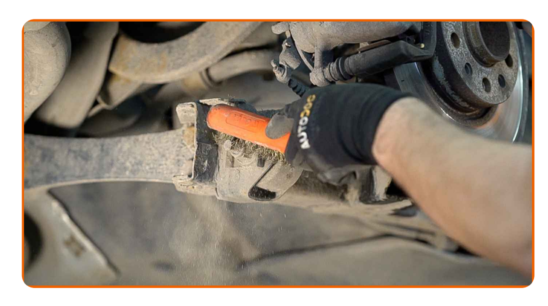
31

Unscrew the top fastening of the shock strut mount. Use a drive socket #E14. Use a ratchet wrench.



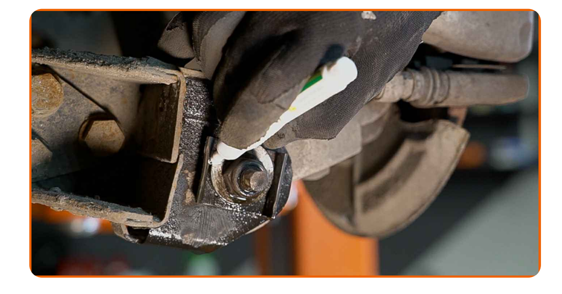
32

Clean the fastener connecting the rear knuckle to the suspension control arm. Use a wire brush. Use WD-40 spray.



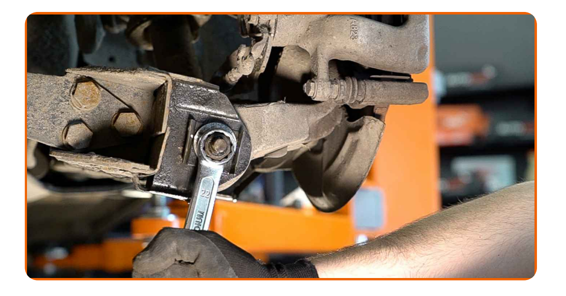
33

Make a mark on the camber adjustment bolt.



34

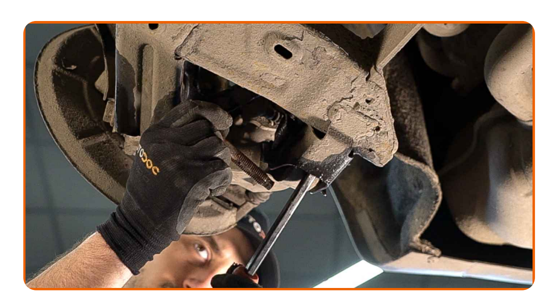
Unscrew the rear fastener connecting the rear knuckle to the suspension control arm. Use a combination spanner #22.



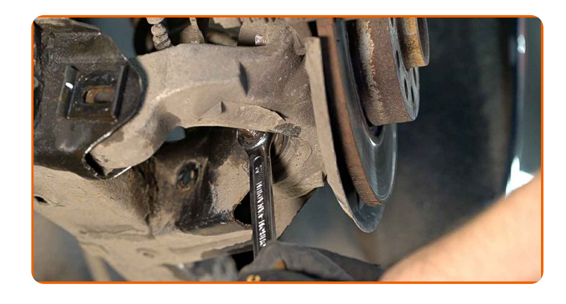




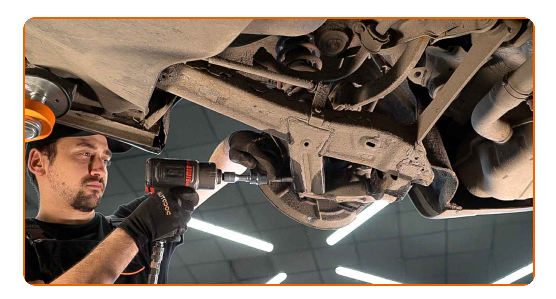
35 Remove the fastening bolt. Use a crowbar. Use a rubber mallet.



36 Unscrew the front fastener connecting the rear knuckle to the suspension control arm. Use a combination spanner #21.

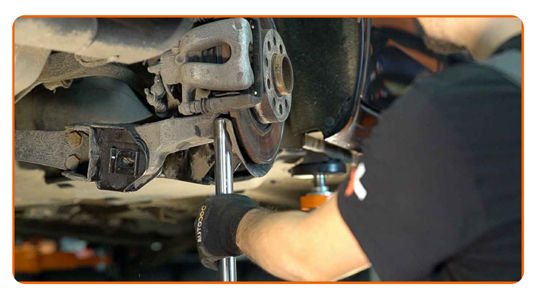


37 Remove the fastening bolt.



38 Detach the rear knuckle from the suspension control arm.

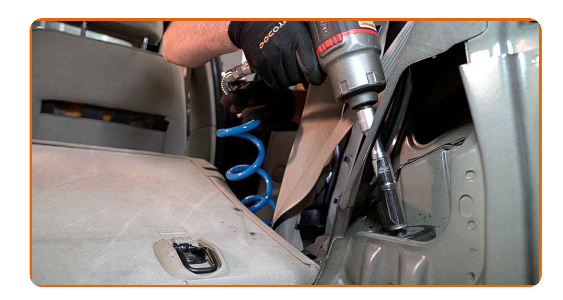
39 Support the stub axle. Use a hydraulic transmission jack.



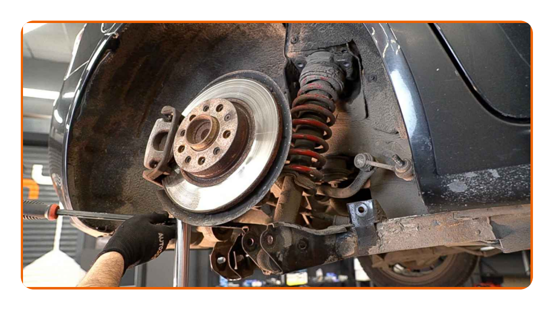




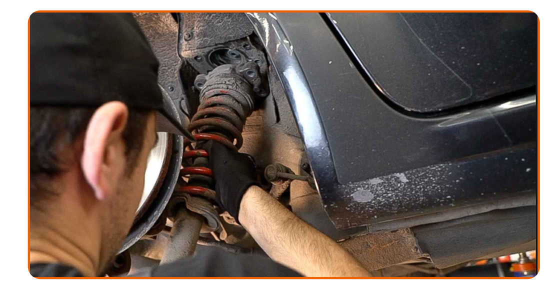
40 Remove the strut piston rod nut. Use a drive socket #16.



41 Pull down the suspension control arm. Use a crowbar.



42 Remove the suspension strut.



43 Set the shock absorber strut on the spring compressor tool.



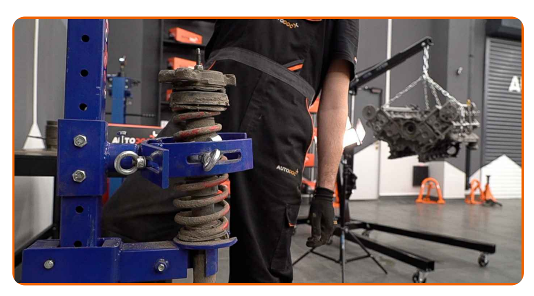




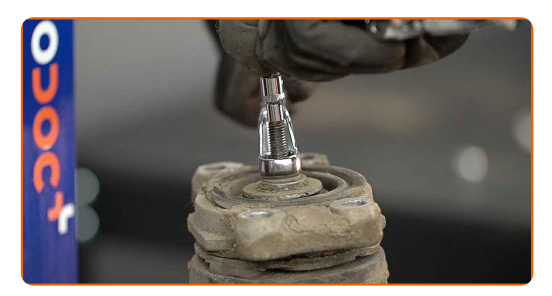
Replacement: coil springs – Alfa Romeo 159 Sportwagon. Tip from AUTODOC experts:

- Note that when using a spring compressor, spring coils need to be securely gripped, compressing the spring on the opposite sides.
- Ensure the correct position of the spring in the retainer.
- Make sure that the spring coils tightly entered the lock handles.

44 Compress the spring.



45 Remove the strut piston rod nut. Use a combination spanner #17. Use a drive socket #8. Use a ratchet wrench.



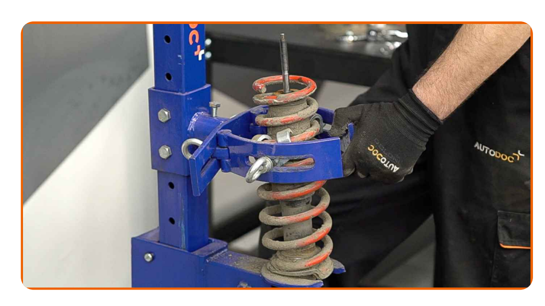
46 Remove the top strut mount. Use a crowbar.



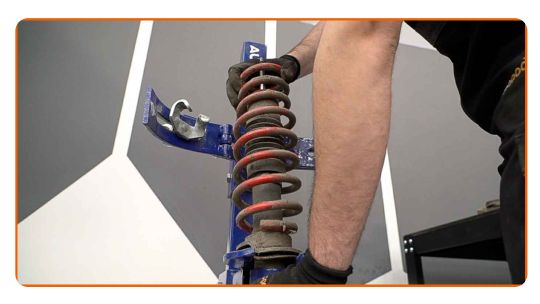




47 Release the coil spring.



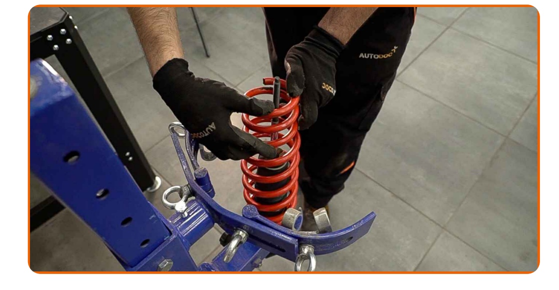
48 Remove the spring.



AUTODOC recommends:

- Replacement: coil springs – Alfa Romeo 159 Sportwagon. Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

49 Install the spring on the shock absorber.



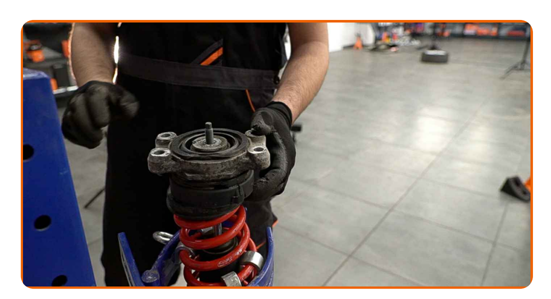
50 Compress the spring.



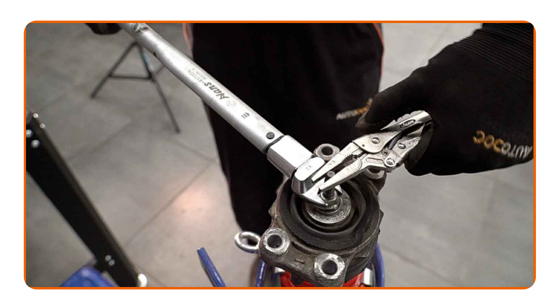




51 Install the upper strut mount and the strut mount bearing.



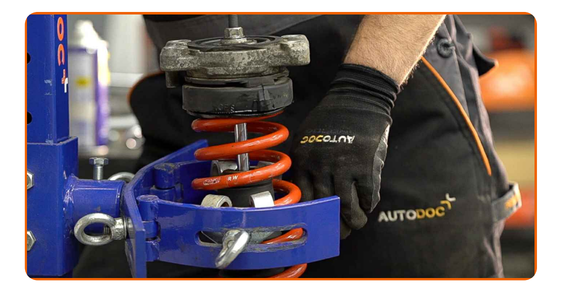
52 Tighten the shock strut piston rod nut. Use a combination spanner #17. Use locking pliers. Use a torque wrench. Tighten it to 37 Nm torque.



Replacement: coil springs – Alfa Romeo 159 Sportwagon. AUTODOC recommends:

- Check to make sure the spring is positioned correctly. Avoid its misalignment.
- Important! Be sure to use new fasteners.

53 Decompress the spring.



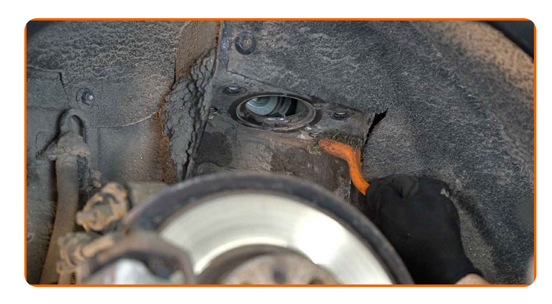




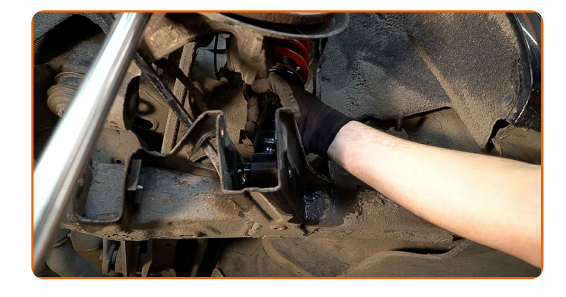
54 Remove the assembled shock strut.



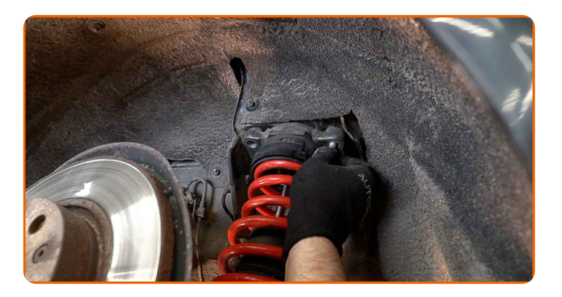
55 Clean the mounting seats of the shock strut. Use a wire brush. Use WD-40 spray.



56 Install the shock strut into the wheel arch.



57 Screw the top fastening of the shock strut mount. Do not tighten it.



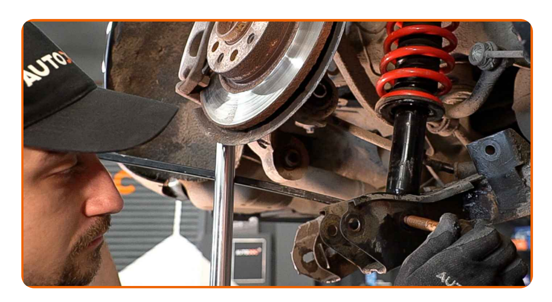
AUTODOC recommends:

- Alfa Romeo 159 Sportwagon – To avoid injury, hold the suspension strut while screwing in the fastening bolts.

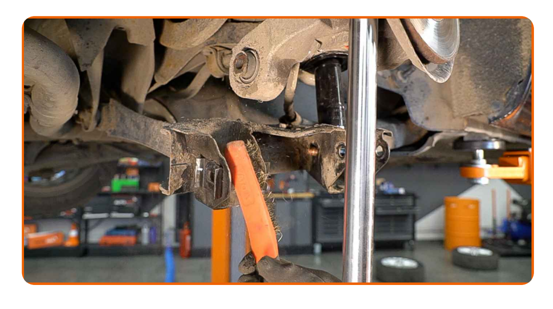




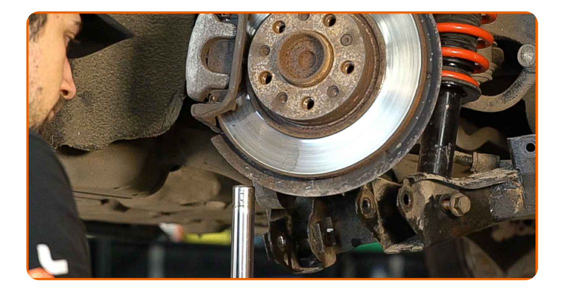
58 Install the fastening bolt.



59 Clean the mounting seats of the rear knuckle. Use a wire brush. Use WD-40 spray.



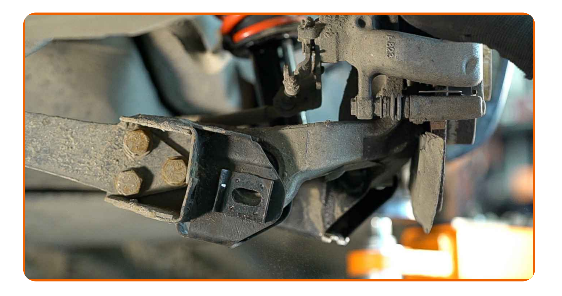
60 Lower the hydraulic transmission jack by 10-15 cm.



AUTODOC recommends:

- Alfa Romeo 159 Sportwagon – Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.

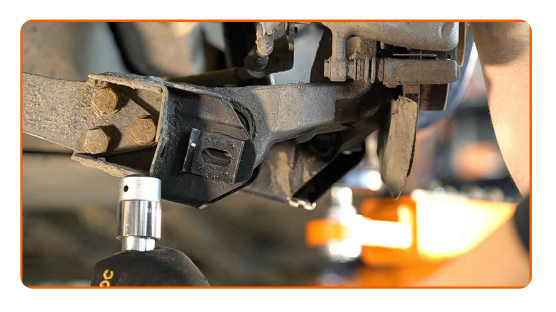
61 Attach the rear knuckle to the suspension control arm.



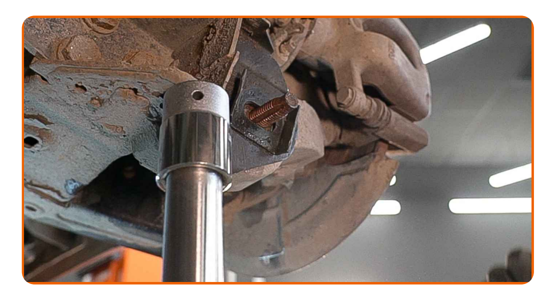




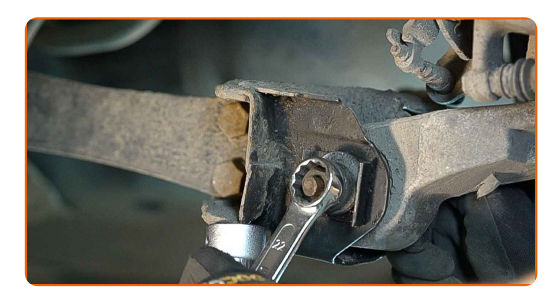
62 Support the arm. Use a hydraulic transmission jack.



63 Install the fastening bolt. Use a crowbar.



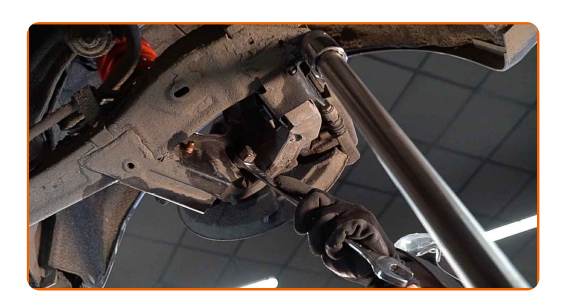
64 Screw in the rear fastener connecting the rear knuckle to the suspension control arm. Use a combination spanner #22.



65 Install the fastening bolt. Use a crowbar.



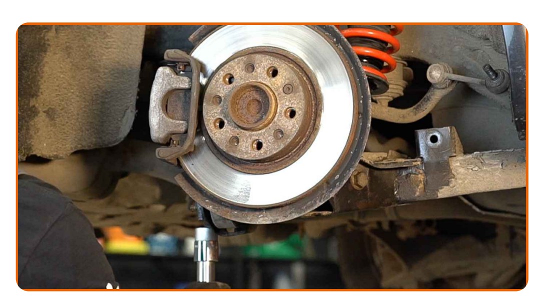
66 Screw in the front fastener connecting the rear knuckle to the suspension control arm. Use a combination spanner #21.



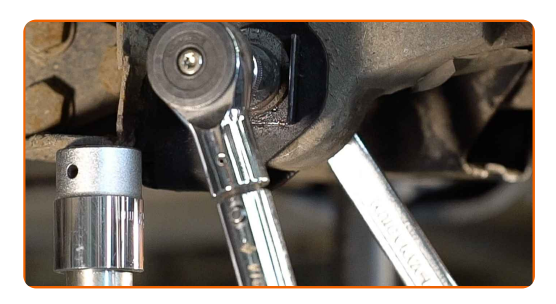




67 Raise the hydraulic transmission jack by 10-15 cm.



68 Tighten the rear fastener connecting the rear knuckle to the suspension control arm. Use a drive socket #21. Use a torque wrench. Tighten it to 105 Nm torque.+45°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

69 Tighten the front fastener connecting the rear knuckle to the suspension control arm. Use a drive socket #22. Use a torque wrench. Tighten it to 105 Nm torque.+90°

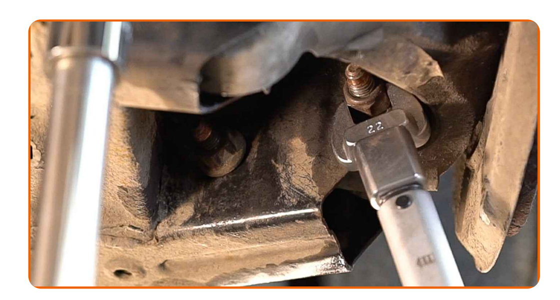
Replacement: coil springs – Alfa Romeo 159 Sportwagon. Tip from AUTODOC experts:

- Important! Be sure to use new fasteners.

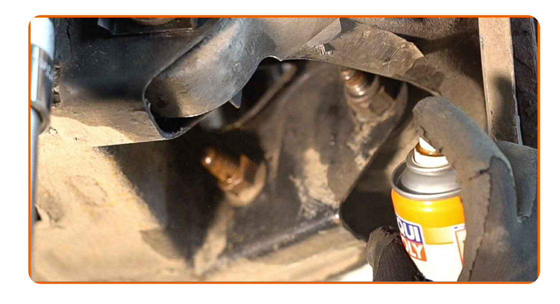




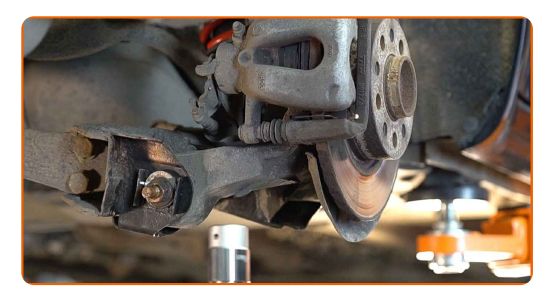
70 Tighten the fastener connecting the shock strut to the suspension control arm. Use a combination spanner #21. Use a drive socket #21. Use a torque wrench. Tighten it to 130 Nm torque.



71 Treat the rear knuckle fasteners. Use copper grease.



72 Remove the support from under the arm.



AUTODOC recommends:

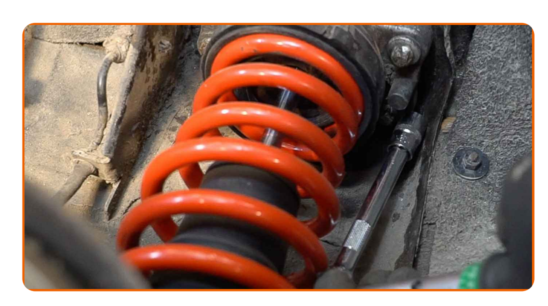
- Replacement: coil springs – Alfa Romeo 159 Sportwagon. Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.





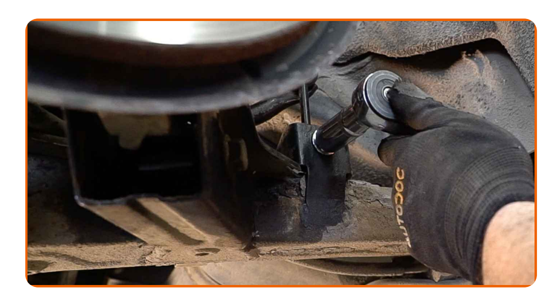
73

Tighten the upper fastener of the shock absorber strut mount. Use a drive socket #E14. Use a torque wrench. Tighten it to 30 Nm torque.



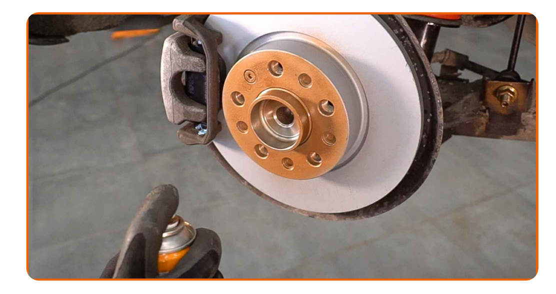
74

Tighten the fastener connecting the stabilizer bar with the control arm. Use a combination spanner #18. Use a drive socket #18. Use a torque wrench. Tighten it to 55 Nm torque.



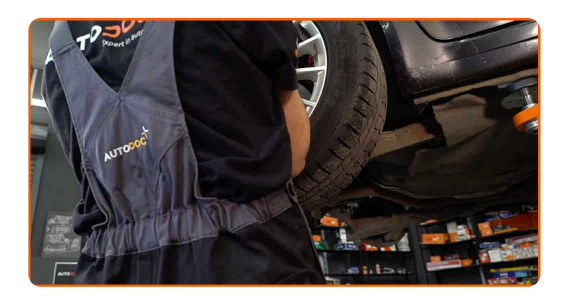
75

Clean the wheel rim mounting seat. Use a wire brush. Treat the contacting surface. Use copper grease.



76

Install the wheel.



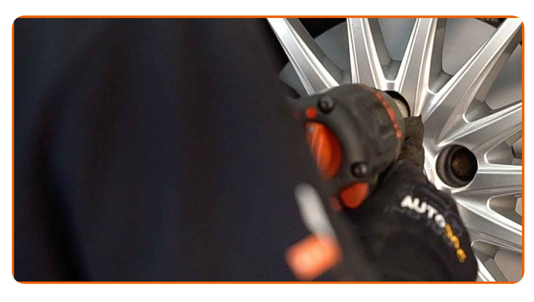




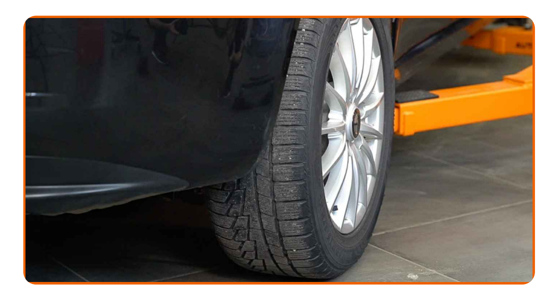
AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. Alfa Romeo 159 Sportwagon

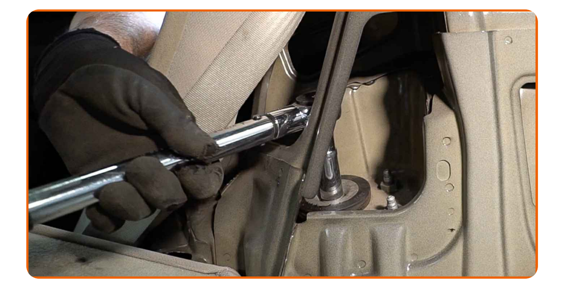
77 Screw in the wheel bolts. Use wheel impact socket #17.



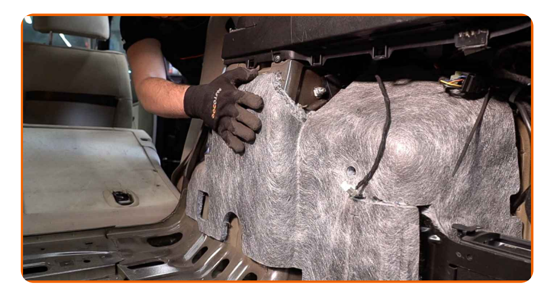
78 Lower the car.



79 Tighten the shock strut piston rod nut. Use a drive socket #16. Use a torque wrench. Tighten it to 37 Nm torque.



80 Install the boot side sound insulation and screw in its fasteners.







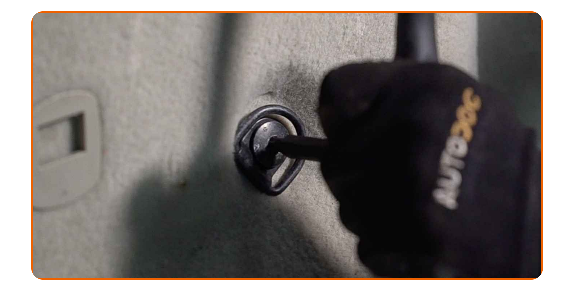
81 Attach the side lining of the boot.



82 Attach the bulb connector. Install the clips of the boot side lining.



83 Screw in the fastener of the boot side lining. Use Torx T25. Use a ratchet wrench.



84 Install the cover of the boot side lining.



85 Install the side plastic panel.





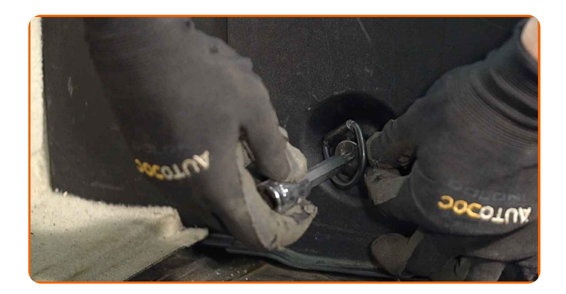
86 Screw the fasteners of the side plastic trim panel. Use a Phillips screwdriver.



87 Install the central protective plastic panel.



88 Screw in the fastener of the central protective plastic panel. Use Torx T25. Use a ratchet wrench. Use a Phillips screwdriver.



89 Install the boot front lower lining.



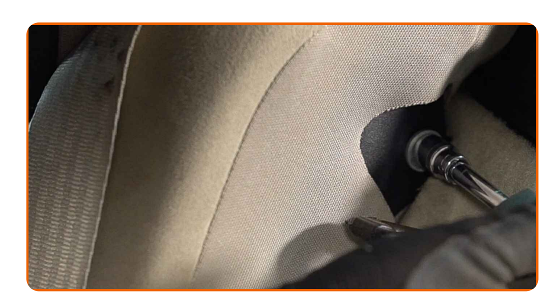
90 Install the clips of the boot front lower lining.







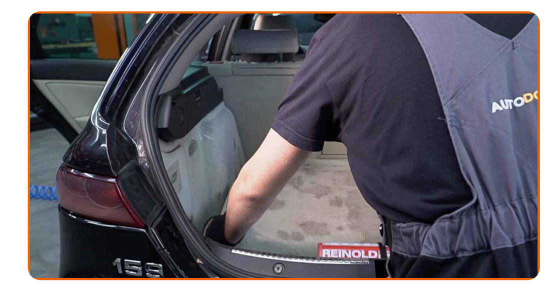
91 Install the seat belt trim cover. Use a drive socket #10.



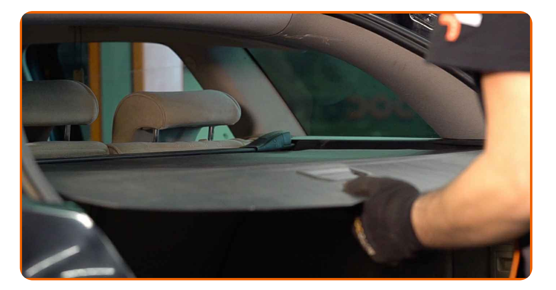
92 Return the seat to its original position.



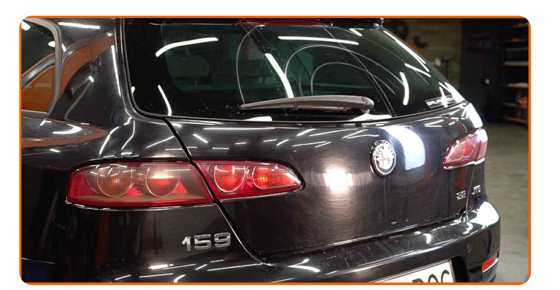
93 Put down the lower lining of the boot.



94 Install the folding shelf to its mounting seat.



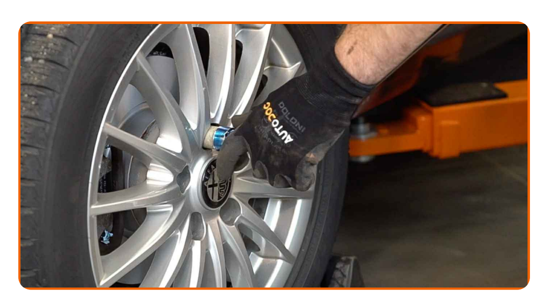
95 Close the lid of the luggage compartment.



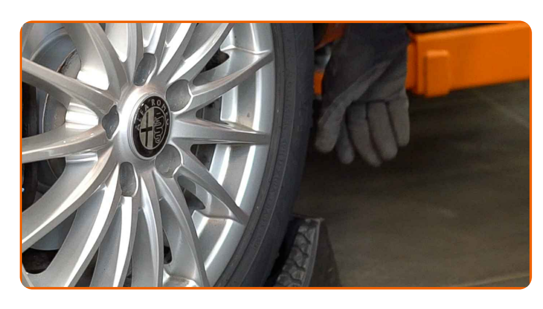




96 Tighten the wheel bolts using a criss-cross pattern. Use a torque wrench. Tighten it to 120 Nm torque.



97 Remove the jacks and chocks.



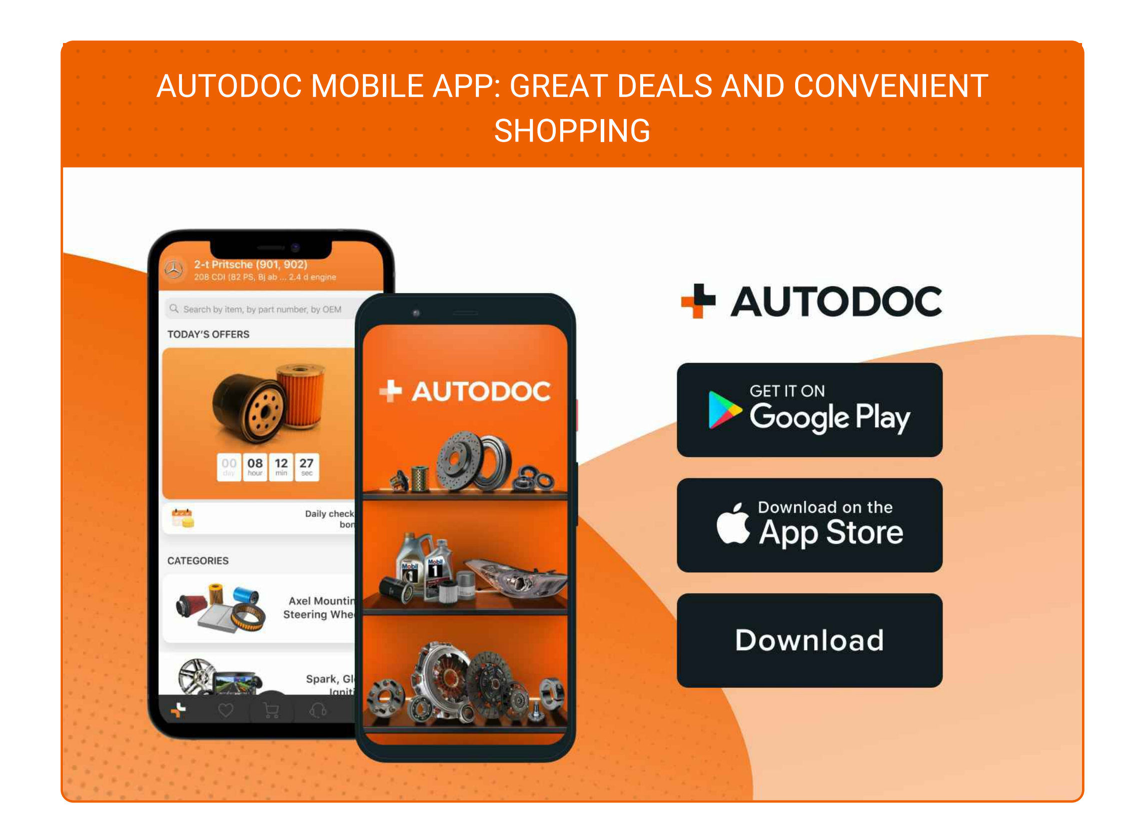
WELL DONE!







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